equivalent service), and directory assistance.[279] I conclude that these proposed elements should be included for purposes of this docket in the definition of basic service.

Parties have also urged the Board to include further elements in its definition of basic service. In particular, parties propose to include (1) single party service,[280] (2) continuous emergency access ("CEA" or "left-in dial tone"),[281] and (3) extended area service.[282] Not surprisingly, these proposed elements parallel those basic service elements investigated in other Board dockets, two in particular.[283] In Docket 5700, the Board ordered NYNEX to provide single-party service,[284] touch-tone service,[285] and CEA[286] as part of its basic service package.

There is no disagreement among the parties about including single-party service in basic service. There is, however, disagreement about including CEA in the definition. The evidence in this docket persuades me that CEA should be a component of the service obligation of CLECs, though it need not be treated as an element of basic service; this conclusion is certainly consistent with the Board's decision in Dockets 5700/5702. I direct

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279. The DPS, NYNEX, and AT&T argue that basic service should include access to directory assistance and white page services. *See* DPS Brief at 14; NYNEX Brief at 75; and AT&T Brief at 58. It is not readily apparent that white pages, as we know them today, will survive in a competitive environment. The next phase of this investigation will need to revisit this issue. The parties should consider whether there is a need to establish ground-rules for sharing and updating a common database which could be available to and distributed by all service providers.

280. *See* DPS Brief at 14. "Two-way telecommunications service should be provided through single party lines to ensure access to emergency services and all telecommunications features." Shapiro pf. at 14; Dockets 5700/5702, Order of 10/5/94 at 151-154.

281. Tr. 8/28/95 at 91.

282. DPS Brief at 14; NYNEX Brief at 75; AT&T Brief at 59. While suggesting that not all competitors need configure local calling areas of the same size as those currently in effect, NYNEX maintains that the "existing local/toll definitions in place should apply to local/toll compensation." NYNEX at 75; Calabro pf. at 27. AT&T would limit the availability of local usage. AT&T Brief at 59.

283. Docket 5700/5702, Order of 10/5/94; and Docket 5670 (re: Extended Area Service), Order of 9/6/95.

284. The Board ordered the elimination of multi-party service so that NYNEX subscribers would gain access to many of NYNEX's custom calling features and also the Enhanced 9-1-1 ("E-911") emergency response system mandated by 30 V.S.A. § 7051 *et seq.* Dockets 5700/5702, Order of 10/5/94 at 151-154.

285. The Board found that touch-tone service provided obvious consumer benefits such as ease of dialing and greater access to network services. It also found that touch tone imposed no additional costs. *Id.* at 155-156.

286. In Docket 5700, the Board found that CEA would assure that all subscribers and all service locations have access to emergency service, including 911, and access also to the telephone company itself for purposes of, say, ordering new service or negotiating bill-payment plans. The implications of requiring all service providers to include CEA with their basic service packages is not immediately apparent. *Id.* at 156.

the parties, in Phase II, to address issues associated with the administration of CEA in a competitive market.[287]

In Docket 5670, the Board investigated extended area service offerings and local measured rates in Vermont, as well as their applicability to all current local service providers.[288] The issue of including extended area service within the definition of basic service has been raised by the Department, NYNEX, and AT&T.[289] The Department urges the Board to adopt the minimum local service area requirements established in 5670 for the purposes of basic service.[290] NYNEX maintains that all competitors need not necessarily provide local calling areas of the same size as those offered by NYNEX, however, local/toll definitions currently in place ought to apply to local/toll compensation.[291]

On review of the record, I conclude that basic service and other relevant obligations of the local exchange carrier should consist of (1) single-party service, (2) continuous emergency access, and (3) the availability of extended area service. Single-party service itself should be made up of several components: switched voice-grade communications, access to toll service, and relay service as appropriate. In addition, installation and repair services, white pages (or equivalent), and directory assistance should also be elements of the basic service package.[292]

As discussed in Section III.F.4. below, I am also recommending that service quality and privacy issues be investigated in a separate docket. I conclude that basic service must include certain minimum service quality, customer protections, and privacy assurances.

2. Universal Service

In 1993, the Vermont Legislature established a program which would assist "every Vermont household to obtain basic telecommunications service at an affordable price, and to

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287. For instance, for what period of time after disconnection shall CEA continue? What, if any, difficulties does CEA pose for celluar providers? What mechanisms can be established to ensure that the connection cannot be used to create or perpetuate an undue competitive advantage among providers?

288. Docket 5670, Order of 9/6/95.

289. DPS Brief at 14; NYNEX Brief at 75; and AT&T Brief at 59.

290. Raymond reb. pf. at 41; Shapiro pf. at 14; Wiginton reb. pf. at 7; DPS Brief at 14.

291. Calabro pf. at 26-27.

292. There are, of course, questions still to be addressed, such as the length of time after disconnection that CEA should be maintained, and how access to all CLECs' business offices should be provided. Furthermore, there may be issues peculiar to wireless CLECs that justify different requirements for those companies.

finance that structure. . . ."[293] This program, called the Vermont Universal Service Fund, is funded by "a proportional charge on all telecommunications transactions that interact with the public switched network."[294] This mechanism has not as yet been authorized for use in providing high cost assistance and, in any event, it is capped by legislation at two percent of gross retail revenues.[295] Thus, by virtue of the local exchange company being a customer's sole connection to the public switched network, universal service funding is currently distributed on a provider-specific basis rather than on a customer-specific basis.

The advent of local competition will require a review of the provider-specific manner in which universal service funding is currently being allocated.[296] Several parties in this docket contend that the existing funding structure is inconsistent with effective competition, because it is based on an implicit system of pricing and transfer mechanisms.[297] Others acknowledge this and urge the Board to develop a mechanism that is competitively neutral and does not favor one provider over another.[298]

Two proposals for meeting the objectives of universal service have been advanced. The first is the "pay or play" plan forwarded by NYNEX. As described in more detail in Section III.E.2. above, "pay or play" is a compensation arrangement between interconnecting carriers who agree to meet certain service obligations, including geographic and customer-specific criteria, within an established timeframe in order to receive compensation from the incumbent LEC for terminating traffic.[299] For the reasons set out in that section, I have recommended that the Board reject the "pay or play" proposal.

The second proposal is for disbursement through the "virtual voucher." It is a means of providing individual customer funding and is proposed by MCI, Frontier, and Hyperion.[300]

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293. 30 V.S.A. § 7501 *et seq.*

294. *Id.*

295. In Phase II, the parties will be asked to propose explicit and competitively neutral high-cost support mechanisms as alternatives to the Vermont USF, in the event that the legislature determines that the USF shall not be used for the purposes considered here (or shall not be the only mechanism for such purposes).

296. MCI Brief at 16 and 18.

297. Ankum pf. at 20-21; Cornell reb. pf. at 22.; MCI Brief at 16; DPS Brief at 16; and AT&T Brief at 59.

298. Shapiro pf. at 5; Friar pf. at 16; Raymond reb. pf. at 50; Ankum pf. at 21, 23-24; tr. 8/27/95 at 108, 115, 169; tr. 8/28/95 at 65; tr. 8/29/95 at 17; tr. 8/30/95 at 100; MCI Brief at 2; AT&T Brief at 59.

299. Calabro pf. at 24-25; tr. 8/31/95 at 71.

300. Tr. 8/27/95 at 108; MCI Brief at 18.

The virtual voucher system, in effect, provides universal service support to a customer rather than to an individual LEC. The system allows each customer to choose her own local exchange company; that company would then "receive from the fund (in the form of a credit) an amount equal to the required subsidy."[301]

The Department does not, at this point, propose a specific mechanism for supporting universal service, but the DPS does believe that the existing universal service funding mechanism can be adapted to meet its objectives in the competitive local exchange market.[302] However, the DPS argues that the development of such a mechanism warrants further investigation in this proceeding.[303] One issue to be resolved—the foremost issue according to the Department—is the size of the fund itself.[304]

I concur with the Department. This question has not yet been examined fully. In fact, it was never intended that this Phase would dispose of the issue; rather, our objective here was to explore the general relationship between competition and universal service, and to identify the issues pertinent to the equitable collection and disbursement of universal service funds in a competitive market.[305] At least in part, the Board's decision in this respect depends on the underlying costs of the elements of basic service and must await, therefore, the completion of the cost studies.

Several comments may help guide the parties in their further efforts in this context. The virtual voucher mechanism appears promising. My preliminary opinion is that it satisfies the requirement of competitive-neutrality in disbursement. However, at this point, I am not persuaded to accept the recommendation of AT&T that universal service "funding should only be provided based on economic need and should follow the subscriber."[306] Since the general premise for universal service support is to offset the high average loop costs faced by Vermonters, it would seem that a per-subscriber credit, regardless of income, would be appropriate. Other programs to meet the needs of, say, low-income customers (such as Lifeline and Link-Up) need not be affected by this.

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301. Ankum pf. at 24.
302. DPS Brief at 22.
303. *Id.* at 23.
304. *Id.*
305. Order of 3/1/95 at 6.
306. Friar pf. at 14; AT&T Brief at 57.

We will address these issues in greater detail in Phase III, including the question of whether additional legislative action would be useful or necessary to achieve any recommended objectives.

3. Carrier of Last Resort and Service Area Requirements

Carrier of last resort issues will be explored fully in the later phases of this docket.[307] At this time, however, several observations should be made.

The Board is entirely aware of the public interest implications of this subject. There is also no question among the parties of the necessity of assuring that a carrier of last resort is available to all Vermont customers.[308] Nevertheless, there is some disagreement among the parties that centers on the scope and application of the carrier of last resort requirements which have yet to be determined. MCI made the general suggestion to relax the carrier of last resort obligations.[309] AT&T is opposed to service area requirements on grounds that they constitute barriers to entry.[310] NYNEX, on the other hand, argues that such a requirement would be fair and reasonable.[311]

At this point, I conclude that, in conjunction with the network unbundling requirements and pricing rules recommended in this proposed decision, as well as appropriately designed local resale opportunities (to be developed in Phase II), certain service area obligations should not constitute a significant barrier to competitive entry. For example, it may be reasonable to require, as a condition for receiving universal service support, that a CLEC serve all customers who request service in those areas in which the CLEC is certified to operate. This would apply to the incumbent LEC as well. I cannot make a final recommendation on this question today—there are yet too many details to be resolved before

307. *See* Shapiro pf. at 15; tr. 8/28/95 at 110; tr. 8/28/95 at 176, 226, and 305; DPS Brief at 60, 72-73.

308. "Every customer should have a carrier of last resort . . . to fulfill basic service obligations, including both Basic Facility and Basic Service." Shapiro pf. at 15; *see also* tr. 8/28/95 at 305.

309. Tr. 8/28/95 at 175.

310. AT&T Brief at 51, 53.

311. Calabro pf. at 7-8, 22, 24-25.

a decision can be made—but I direct the parties to develop detailed proposals for consideration in Phase III.[312]

4. Minimum Service Quality Standards, Evolving Privacy Issues, and Other Consumer Safeguards

While not explored in much depth in this docket, service quality and customer privacy have been considered and acknowledged as issues worthy of further investigation as these markets become competitive.[313] At a minimum, the service quality, privacy protections, and other safeguards afforded consumers should not be degraded by competitors. The privacy selections available to consumers in the current environment should be extended to an environment with multiple providers. Finally, the actual privacy selections (*e.g.*, unlisted numbers, caller ID blocking) should be respected by all carriers. However, it is not necessary that these questions be resolved in this docket. Consequently, I recommend that the Board immediately open a separate and parallel investigation into these issues.[314]

5. Other Public Service Obligations

In the past, the LECs, the Department, and the Board have worked to establish existing consumer safeguards and protections.[315] In addition to customer privacy, discussed above, these protections have included, for example, protection from abuses associated with pay-per-call services.[316] These protections have also have been intended to satisfy certain customer expectations.[317]

No one argues that competition will obviate the need for such safeguards in the future. I see no reason to relax the customer protections developed under the current regulatory

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312. In particular, I would like to explore the relative advantages and disadvantages of the various alternatives for service area obligations, to wit: (1) state-wide, (2) exchange-level, (3) census block, (4) or any others that are reasonably proposed.

313. Calabro pf. at 3 and 19; tr. 8/28/95 at 108 and 109.

314. I believe, however, that privacy issues in that docket will be most fruitfully reviewed once the mechanisms for sharing customer information between providers has been established in Phase II of this investigation.

315. Calabro pf. at 31; tr. 8/31/95 at 112.

316. *Id.*

317. Tr. 8/31/95 at 116.

system.[318] Nor is there any authority or reason to abandon other programs such as Lifeline,[319] Link-up,[320] 911,[321] or E-911.[322]

G. Industry Structure and Regulatory Requirements

1. Certificates of Public Good

Currently, a firm must be granted a certificate of public good ("CPG") by the Board before it may offer telecommunications services in Vermont. The Department and ATP recommend that the CPG requirements for new entrants be eased, although they do not suggest specific reforms.[323] The Department maintains that this is a question for Phase III.[324]

I agree. At this time, there is no reason to change the current regulatory processes with respect to CPGs. The parties are directed to consider this issue in the final phase of this docket.

2. Tariff Filing Requirements

As with CPGs, the record in this case so far does not support a finding that current regulatory requirements for the filing of tariffs by telecommunications providers should be altered. This too is a question for the third phase.

H. Independent LECs

As described in Section III.D.3.a., Cost Study Methodology, I have recommended that the independent LECs be given some flexibility in determining the costs of their unbundled services. They should be given the option to perform their own cost studies, alone or in

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318. Calabro testimony of 8/31/95 at 205.

319. Lifeline is a program through which low income Vermont customers can have access to dial tone at reduced charges.

320. The Link-up program is designed to connect low-income Vermont customers telecommunications installation at half the cost.

321. 911 service allows a caller to dial those three numbers and to be automatically connected to the local emergency service dispatcher, usually a police agency.

322. Enhanced 911, known as E-911, is a more expensive service which uses software that routes calls and dispatches emergency service based on caller location.

323. Raymond pf. at 10; ATP Proposed Decision at 20.

324. DPS Brief at 69.

cooperation with other Vermont ILECs, or rely upon the results of a properly performed study by NYNEX.

IV. CONCLUSION

I recommend that the Board adopt the rules for network unbundling, costing and pricing, and interconnection that are set out in detail in Section III. In addition, I recommend that the Board direct NYNEX to modify its cost study proposal to meet the concerns raised by other parties and file it within sixty (60) days of this Order.[325]

Also in this proposed decision I have instructed the parties to prepare testimony and evidence on specified issues, for examination in Phases II and III. Those directives are, of course, in addition to the list of issues set out in my Procedural Order of March 1, 1995.

I have become convinced by the broad range and intricacies of the issues in this docket that Phase II will be more efficient if we proceed, at the start at least, with structured workshops of the sort described by the Department in its letter of June 28, 1995. In my procedural order of October 27th, I set January 23, 1996, as the date of the first workshop. Because of a scheduling conflict, that workshop must be moved back two days, to January 25th. At that time, the parties shall be prepared to propose detailed processes and objectives for those workshops, and a time-frame for their completion.

Also in that October 27th Order, I directed the parties to file their Phase II position papers on January 5, 1996. It appears more sensible to me now, in light of the extraordinary complexity of this case, that it is appropriate to extend the deadline for the position papers until after that first workshop. Accordingly, Phase II position papers shall be filed on or before February 2, 1996. In this way, the parties will have more time to file their comments on this proposed decision.

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325. *See* Section III.D.3.c.

This Proposal for Decision has been served on all parties to this proceeding in accordance with 3 V.S.A. § 811.

DATED at Montpelier, Vermont, this 8th day of February, 1996.

Frederick W. Weston, III
Hearing Officer

V. BOARD DISCUSSION

Today we issue a final Order in the first phase of this three-part investigation into competition in the local telecommunications market. We began this review in the conviction that the time has come to open the local exchange market to competitive forces in order to provide greater choice, enhanced capabilities, and improved service for all customers of the public switched network. Events have occurred since this investigation began that only underscore the need for clear and fair rules to manage the competitive process. This Order is a first step in the development of that new competitive environment in Vermont.

A. The Federal Telecommunications Act of 1996

On February 8, 1996, the Telecommunications Act of 1996 ("Act") was signed into law by President Clinton. It is the first comprehensive national telecommunications legislation to be passed since 1934. It implements significant legal and regulatory reforms at the state and federal levels, and imposes new duties and responsibilities on carriers for the purpose of opening telecommunications markets to competitive entry. In so doing, the Act seeks to subject telecommunications providers to the discipline of the marketplace, thereby stimulating technological innovation, efficiency, and improvements in service quality and reliability.

Our decision today is consistent with—indeed, complements—the Act. The principles and mechanisms that we adopt will facilitate the work that we do under the Act, and give much-needed guidance to market participants as they move forward in the competitive environment. Moreover, this Order provides a solid foundation for the resolution of the detailed technical and economic issues to be addressed in the later phases of this docket, and upon which fair competition over the long-term will depend.

We recognize, however, that the Act imposes some near-term obligations upon regulators, incumbent providers, and competitors that may require immediate action in the absence of complete information and a more fully developed record. Specifically, the Act sets compressed time-lines for the review, mediation, and arbitration of such agreements. We may shortly be called upon to approve the rates, terms, and conditions of agreements, even in the absence of reliable cost studies (conducted pursuant to Section III.D.3., above) and other relevant information. We fully expect parties to negotiate interconnection agreements that are

consistent with the requirements of this Order and in the knowledge that future decisions in this docket may have impacts on the on-going administration and approval of interconnection arrangements.

It is obviously necessary that this docket continue and that the parties and Hearing Officer take all reasonable steps to resolve outstanding issues in a timely manner. While we expect that our work under the Act will address a number of the issues that this docket has yet to fully explore (at least in some, perhaps interim, measure), many questions still deserve the considered study recommended by the proposal for decision. Among those issues are: the appropriate methodology for calculation of the "mark-up" for joint and common costs, rate design, service territory requirements, the obligation to serve, and universal service. Our reviews of interconnection agreements may deal with aspects of these issues, but we cannot expect to resolve them fully and finally in the time-frames contemplated under the Act. We commend the parties for their substantial efforts so far in this docket, and remind them that we all have much work yet to do.

B. Comments on the Proposed Decision

Generally speaking, the parties support the proposal for decision ("PfD") and recommend that the Board adopt it. Most commenters, however, also recommend that the Board amend certain provisions of it. Briefly, the parties' positions can be summarized as follows.

The Department of Public Service strongly supports the PfD and recommends that it be adopted, subject to several minor modifications.

NYNEX generally endorses the proposal for decision, but requests that it be modified in a number of ways. In particular, NYNEX requests that the Board modify the definition of essential services, adopt the Efficient Component Pricing Rule, decline to order the Company to negotiate interconnection agreements with cellular providers, and approve NYNEX's "pay or play" proposal.

Three interexchange carriers—AT&T, MCI, and Frontier—also support the proposed decision, but urge the Board to modify it in certain ways. Specifically, MCI and Frontier recommend that the Board set the total service long-run incremental cost (TSLRIC) as the price ceiling for interconnection, with no mark-up for unrecovered joint and common costs.

Frontier further recommends that, in order to assure that interconnection rates are set at TSLRIC and to reduce the administrative costs of all competitors, the Board should order "bill and keep" as the method of compensation for interconnection. And both AT&T and Frontier object to the Hearing Officer's recommended imputation standard, which recognizes potential cost differences between a LEC's provision of a feature or functionality to itself and its provision of that same feature or functionality to a competitor.

Atlantic Cellular and Hyperion (jointly the ATP) support the proposal for decision and, like Frontier and MCI, request that the Board cap interconnection rates at TSLRIC. The ATP also ask the Board to "specify on an interim basis . . . the physical and compensation terms for interconnection." ATP Comments at 3.

Lastly, the Independent LECs also support the PfD. They note several issues that they believe require further consideration in Phase II (*e.g.*, whether the ILECs are, indeed, natural monopolies and what the impacts on public policy of such a conclusion should be) and they request that the Board approve the ECPR as a method for calculating the "mark-up."

We have considered the parties' written comments on the proposal for decision and also their oral arguments. No new arguments on specific issues were raised, nor was it shown that the Hearing Officer had overlooked any relevant facts or other considerations in reaching his conclusions. Based on our review of the record and of the Act, and for the reasons detailed in the proposed decision, we adopt the Hearing Officer's findings and conclusions, with minor modifications as discussed below.

1. Pricing for Interconnection and Unbundled Network Functionalities

The proposal for decision describes six broad guidelines that a LEC must apply in setting both wholesale and retail prices. Among them are the requirements that prices be set no lower than the TSLRIC of a functionality or service, and that a LEC must charge itself the same prices for functionalities that it charges its competitors and other wholesale purchasers

(the imputation rule).[326] The evidence on these points was detailed and persuasive, and the conclusion is consistent with our findings in Dockets 5700/5702.[327]

Beyond these general criteria, however, the proposed decision offers no greater specificity on pricing. In the absence of comprehensive cost studies and more detailed analysis of the network, the Hearing Officer did not recommend specific rate design policies.[328] Such questions were left to the subsequent phases of the Docket. This is appropriate.

Rate design is a complex process, affected by many technical factors and also by public policy considerations. The evidentiary record at this point does not allow us to reach definitive conclusions on a reasonable rate structure. We note that this Phase I decision does not restrict our discretion in determining either the structure or levels of retail prices. No hard and fast rules for the treatment of, say, non-traffic-sensitive costs are being set. Should such costs be recovered through fixed, periodic charges or through usage-based rates, or through some combination of the two? Under longstanding principles of rate design, these are ultimately questions of judgment, not mathematics; our decisions will be informed by economic, legal, equitable, and other policy considerations.

Some guidance for the parties and Hearing Officer in the next phases may be helpful. The telecommunications policies of this state are expressed in statute (30 V.S.A. § 202c,

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326. PfD at 27-36. Specific concerns about the proposed imputation rule are taken up in Section V.B.3., below.

On the question of the resale of a LEC's retail services, the PfD notes that prices can be "either built up from the relevant 'building blocks' or discounted by an amount that, at a minimum, reflect the differences in cost between wholesale and retail provision of the service [*i.e.*, the 'avoided cost' method]." PfD at 26. In theory, the wholesale rates that result from either methodology should be the same. However, for this to happen in practice, the LEC's retail rates would themselves have to be "built up from the relevant building blocks." There is no evidence as yet to suggest that NYNEX's retail rates are set in that fashion.

In any event, we have been spared the effort of having to choose which methodology to employ in setting resale prices. The Act has disposed of this issue by requiring that state public utility commissions:

> determine wholesale rates on the basis of retail rates charged to subscribers for the telecommunications service requested, excluding the portion thereof attributable to any marketing, billing, collection, and other costs that will be avoided by the local exchange carrier.

Act, § 252(d)(3). Even so, we note our expectation that significant differences in wholesale prices set according to the two methodologies will not be long sustainable in a competitive market, because increased facilities-based competition will drive the LEC's retail prices closer to cost (which, in the long run, is TSLRIC).

327. Docket 5700/5702, Order of 10/5/94 at 128.

328. PfD at 40-41.

226a, and 226b), the DPS's *Ten-Year Telecommunications Plan*, and earlier Board Orders. In general, they call for reasonably-priced basic local exchange service, continuing infrastructure development, high service quality and reliability, promotion of universal service, and increased competitive delivery of services where appropriate. The design of a LEC's wholesale and retail rates can have a significant impact on the achievement of these objectives.

This Board remains committed to the principle that basic service rates should be comparable throughout Vermont. Competition and unbundling will be managed so as to ensure that local service in rural communities is reasonably priced in relation to equivalent service in more developed regions of the state. This is an established guiding principle in Vermont, and is explicitly recognized in the policies set out in the federal Act. *See* Act, § 254(f).

Therefore, we direct the parties, in their on-going negotiations and later in their testimony, to consider the implications for public policy of their recommendations. Among the issues to be addressed are the following:

- How can we assure that rates for basic local exchange service (both wholesale and retail) will be reasonable and affordable? Should interconnection rates, at least during the transition to a competitive local exchange market, be set to reduce pressures on a LEC to geographically de-average its dial-tone rates?

- What steps should be taken to protect and promote universal service? What broad-based, competitively-neutral mechanisms should be implemented to meet this goal?

- What general criteria should be considered when designing wholesale and retail rate structures? When, for example, should non-traffic-sensitive costs be recovered in fixed, recurring charges and when is it appropriate to recover them in usage-based rates?[329]

Lastly, the question of rate design must necessarily deal with the appropriate recovery of a LEC's joint and common costs. For the reasons given in Section III.D.4., we reject

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329. The guidelines for the pricing of wholesale services and unbundled service elements set out in Section III.D.4. (pages 35-36, above) are general principles only. Deviations from these rules, particularly number 5, may very well be justified by other policy objectives. Designing rates to reflect the underlying character of cost causation does not necessarily lead us to conclude, for example, that the recovery of non-traffic-sensitive costs in usage-based rates is inappropriate.

NYNEX's Efficient Component Pricing Rule as a method for doing so. However, we recognize that it will be necessary to develop a sensible and dynamic means of assigning certain joint and common costs to rates since, even under a TSLRIC-based pricing regime, not all reasonable costs of service would otherwise be collected. We direct the parties to develop alternative proposals for addressing this issue. Such proposals should take into account, as appropriate, other factors (such as changes in the overall demand for telecommunications services) that will affect the ability of a LEC to recover its reasonable joint and common costs.

2. Service Quality, Privacy, and Other Consumer Protection Issues

The PfD recommends that we open a separate investigation into minimum service quality standards, privacy protections, and other safeguards to which customers should be entitled, regardless of their chosen carriers. We concur. These questions are of critical importance to ratepayers and warrant the attention that they will be given in a tightly-focused investigation. We will open such an investigation now, with the objective of establishing benchmark standards within one year.

The new docket will focus on minimum standards that all carriers will have to meet in providing retail service to Vermont customers. Issues of minimum service quality standards and other related protections that a carrier must meet when providing services to *other carriers* rightly remain within the scope of Docket 5713. We recognize, however, that the line between standards for carrier-to-end-user service and standards for carrier-to-carrier service is occasionally blurred; it seems reasonable to expect that, in certain instances, the minimum standards for retail service will determine the minimum requirements for wholesale service. Consequently, we intend to complete the separate investigation in time for its results to be taken into account during the third phase of Docket 5713, as appropriate.

3. Compensation Mechanisms for Interconnection

We adopt the Hearing Officer's recommendation that LECs be required to interconnect with competitors for the purpose of providing local exchange service. The Act also requires this. As to the question of pricing for interconnection, Atlantic Cellular and Hyperion recommend that we set the price at its TSLRIC and no more. Furthermore, in order to assure

that interconnection rates for local exchange service are set at no greater than TSLRIC, the ATP urge us to require mutual traffic exchange, or "bill and keep," as the method of compensation. During oral argument, the ATP recommended that bill and keep be imposed at least during the initial stages of local exchange competition, until final rates for interconnection (reciprocal compensation) are determined. In addition, they argued that bill and keep will reduce administrative burdens to both competitors and incumbents and, more importantly, set interconnection prices effectively at TSLRIC. ATP Comments at 4; tr. 2/21/96 at 9-20.

For the reasons set out in Section III.E.2., above, we decline to order that interconnection rates be capped in all instances at TSLRIC. However, we do adopt bill and keep as our starting point for compensation arrangements among interconnecting local exchange carriers. The Act provides for incumbents and competitors to negotiate the full range of issues associated with interconnection, including compensation mechanisms. In instances where parties to a negotiation cannot agree on an acceptable compensation arrangement, we intend to order bill and keep. Of course, the Board remains willing to reconsider such a decision, upon receipt of a petition alleging substantial economic or other harm associated with the arrangement. Where a party has demonstrated a substantial harm, we will consider imposition of an alternative reciprocal compensation arrangement.

There are several reasons for this decision to order bill and keep. First, we are not persuaded by the argument that CLECs will gear their marketing efforts to customers whose local exchange traffic terminates predominantly on the incumbent's network. NYNEX presented no compelling evidence on this point, and there is no reason at this time to conclude that the absence of reciprocal compensation will pose a significant threat to the Company's revenues. Second, by settling on bill and keep arrangements at least until a final order is issued in this docket, the incumbents and CLECs will likely avoid significant administrative, negotiation, and litigation costs. And, third, bill and keep also offers a powerful incentive to both competitors and incumbents to minimize their costs of interconnection.

On a final point, the Act states that:

> A local exchange carrier shall make available any interconnection, service, or network element provided under an agreement approved under this section to which it is a party to any other requesting

> telecommunications carrier upon the same terms and conditions as those provided in the agreement.

Act, § 252(i). This provision appears intended to assure that all competitors, insofar as they are purchasing similar features and services at wholesale, are treated in the same fashion by the incumbent. In this way, the incumbent cannot unduly discriminate among CLECs, and thereby distort the efficient workings of the market. We believe that this provision applies as well to the compensation arrangements that LECs offer for interconnection: unless justified by specific circumstances (such as, possibly, significant and costly differences in traffic patterns among CLECs), we see no reason to approve compensation arrangements that will impose heavier burdens on some competitors than on others.

4. Imputation

We adopt the imputation rule proposed by the Hearing Officer. It is correct in theory and applicable in practice.[330] It is intended to promote the most efficient use of the existing telecommunications network. However, we share the concern raised by the ATP and noted by the Hearing Officer that the recognition of cost differences between a LEC's provision of a service or functionality to itself and its provision of that same service or functionality to a competitor may create an opportunity for an incumbent to exaggerate such cost differences in order to erect barriers to entry and disadvantage CLECs.[331] To protect against this anti-competitive behavior, we will presume that no meaningful differences between the costs of self-provisioning and wholesale provisioning exist. This rebuttable presumption is supported by the record in this proceeding; while the parties disagreed as to the potential for such cost differences to arise, no party presented empirical data that any cost differences were of significance.[332]

Finally, along these lines, the DPS requested that we clarify the meaning of several terms in the formulas given in Section III.D.4., at page 34 above. Specifically, the Department states that the term $TSLRIC_{BNP \rightarrow LEC}$ in Formula (1) may be redundant, unless it is

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330. *See* Sections III.D.4. at 34-35 and 48-49.

331. *See* Section III.D.4.d., above.

332. Because the incumbent LECs are in possession of the relevant data necessary to reach a final determination on this question, it is appropriate that they bear the burden of proving the existence and magnitude of any such cost differences.

meant "to include the additional costs that the LEC may incur to make the facility available to itself. . . ." DPS Comments at 4. As for the third term in that formula, the DPS assumes that it refers to "the non-network costs of providing retail service, although the Proposal does not state so." *Id.*

The Department's general understanding of formulas is correct, but it confuses the meaning of the second term in Formula (1). The first formula describes the components of the retail price that a LEC charges for a service, built up from one or more Basic Network Functions, or BNFs. The term $TSLRIC_{BNF \to LEC}$ denotes the costs, not of the BNF itself, but rather of making the BNF available for the incumbent's own use. The costs of the BNF are already recognized in the term $TSLRIC_{BNF}$ and are the same for both the incumbent and the CLEC, as the second formula makes clear. Formula (2) describes the components of the wholesale price for one or more BNFs. The term $TSLRIC_{BNF \to CLEC}$ in Formula (2) denotes only the costs that the LEC incurs to make the BNF available to competitors. In neither Formula (1) or (2) is the second term inclusive of the first; they are separate and distinct.[333] As for the third term in formula (1), the DPS's understanding of its meaning is correct.

5. Unbundling

The proposal for decision recommends that we adopt a two-part test for determining whether a request for unbundled service elements should be approved; namely, requested unbundling must be technically feasible and there must be adequate demand for the feature to justify its unbundling. The Act requires only that an incumbent has:

> The duty to provide, to any requesting telecommunications carrier for the provision of a telecommunications service, nondiscriminatory access to network elements on an unbundled basis at any technically feasible point on rates, terms, and conditions that are just, reasonable,

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333. An analogy may be helpful. General Motors ("GM") builds automobiles and sells them at retail. GM also produces parts for those cars, and sells them at wholesale to distibutors, repair shops, and auto-parts stores. It costs GM a certain amount to produce, for example, an alternator, and that cost does not change regardless of whether the alternator is to be installed in an automobile at the GM factory or shipped to a NAPA Parts Store in another state. What does change, however, are the costs of delivering the alternator: it may very well cost GM less to provide the alternator to its own factory than it does to deliver it to NAPA. It is that difference that the pricing formulas on page 34 reflect, but which, as we have just stated, we will presume to be of no meaningful significance, absent sufficient evidence to the contrary.

> and nondiscriminatory in accordance with the terms of the agreement and the requirements of this section and section 252.

Act, § 251(c)(3).

To the extent that the Hearing Officer's recommendation is not consistent with the Act, the standard in the Act should apply. To the extent that demand is relevant at all, it is so as a matter of setting "rates . . . that are just, reasonable, and nondiscriminatory. . . ." *Id.* The point is that both the proposed decision and the Act require that a LEC be fairly compensated for the use of its unbundled facilities. The nature and level of that compensation (*i.e.*, pricing) will naturally be a function of the expected demand for the unbundled elements: price varies with output.[334] There is nothing in the Act to suggest that such considerations should not be taken into account when determining whether the price for an unbundled element is just and reasonable.

VI. ORDER

IT IS HEREBY ORDERED, ADJUDGED, AND DECREED by the Public Service Board of the State of Vermont that:

1. The findings and recommendations of the Hearing Officer are adopted, as modified herein.

2. The rules and guidelines for unbundling, the performance of cost studies, wholesale and retail pricing, interconnection, and basic service as set out in Section III are adopted.

3. NYNEX shall file its modified total service long-run incremental cost study proposal within sixty (60) days of this Order.

4. NYNEX shall comply with all other directives set out in Section III.

5. An investigation into service quality, privacy, and other consumer protection issues shall be opened.

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334. In the case of a declining cost curve, price will decrease as output increases. TSLRIC-based pricing will reflect this relationship, if it exists. So, for example, if the expected demand for an unbundled service element is relatively small, its unit price will be comparably high: and this fact may further affect demand.

DATED at Montpelier, Vermont, this 29th day of May, 1996.

s/Richard H. Cowart)
) PUBLIC SERVICE
s/Suzanne D. Rude) BOARD
) OF VERMONT
s/David C. Coen)

OFFICE OF THE CLERK

FILED: May 29, 1996

ATTEST: s/Susan M. Hudson
Clerk of the Board

NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board of any technical errors, in order that any necessary corrections may be made.

Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.

Appendix A. Definitions of Cost[335]

Common Costs:	Fixed costs that cannot be attributed to any particular service.
Cost Causation:	The determination that an additional cost that would be incurred if an activity were undertaken or saved if the activity were discontinued.
Cost Recovery:	The act of setting prices to recover costs.
Economic Costs:	The forward-looking cost of accomplishing an activity in the most efficient way possible.
Embedded Costs:	The historic accounting costs of providing service.
Fixed Costs:	Forward-looking costs that do not vary with the volume of demand for any service.
Incremental Costs:	The costs that are incurred by a firm to produce the next increment of output. Short-run incremental costs are those incurred to supply the next increment using current capital stock and facilities. Long-run incremental costs are those incurred to supply the next increment assuming that all factors of production are variable, *i.e.*, so that firm can adjust all of its factors of production to meet increment demand at minimum cost.
Marginal Costs:	The costs that are incurred by the firm to produce a single additional unity of output, no matter how small.
Service-Specific Fixed Costs:	Fixed costs associated with the supply of a particular service.
Shared or "Joint" Costs:	Costs associated with a single physical asset which is necessary to produce two or more services (*e.g.*, cost of postage for billing for more than one service).
Shared Fixed Costs:	Fixed costs associated with the production of more than one, but fewer than all, of its services.

335. These definitions are derived from the prefiled testimony of Dr. Taylor (at 7-11) and exh. H-5.

Total Service Incremental Costs: The costs that are incurred by a firm to produce an increment of output equivalent to the entire volume of a service. Total service incremental cost differs from the ordinary incremental costs in two respects: (1) the per-unit total service incremental cost measures an average incremental cost over the entire range of output of the service; and (2) total service incremental cost includes service-specific fixed costs.

Appendix B. Common Abbreviations

Atlantic Cellular	Atlantic Cellular Company, L.P.
ATP	Alternative Technology Providers (Atlantic Cellular and Hyperion)
AT&T	AT&T Communications of New England, Inc.
BNF	Basic Network Function
BOC	Bell Operating Company
CAP	Competitive access provider
CEA	Continuous emergency access ("left-in dial tone")
CLEC	Competitive local exchange company
COCOT	Customer-owned coin operated telephone
CPG	Certificate of Public Good
DAN	Design Access Network
DPS	Department of Public Service (also "Department")
E-911	Enhanced 911 Board
EAS	Extended Area Service
ECPR	Efficient Component Pricing Rule
FCC	Federal Communications Commission
Frontier	Frontier Communications of New England, Inc.
Hyperion	Hyperion Telecommunications of Vermont, Inc.
IILC	Inter-Industry Liaison Committee
ILEC	Independent local exchange company
IXC	Interexchange carrier
LATA	Local Access and Transport Area
LEC	Local exchange company
LNP	Local number portability
LRIC	Long-run incremental cost
MCI	MCI Telecommunications Corporation
MTS	Message Toll Service
NECA	National Exchange Carriers Association
NYNEX	New England Telephone & Telegraph Company (also "NET")
ONA	Open Network Architecture
POP	Point of presence
SCP	Service control point
STP	Signal transfer point
Sprint	Sprint Communications Company, L.P.
TSLRIC	Total service long-run incremental cost
TYP	The DPS's 1992 *Ten-Year Telecommunications Plan*
USF	Universal Service Fund
WATS	Wide Area Telecommunications Service